

What is claimed is:

1. A method for sending a facsimile document to a recipient, comprising:
  - a. generating an electronic mail message to which the facsimile document is attached, the message having associated therewith an address containing a telephone number of the recipient to which the facsimile document is to be transmitted, and a domain name of a facsimile mail server;
  - b. forwarding the electronic mail message to the facsimile mail server;
  - c. determining an IP address of a Gateway whose utilization is lowest to which the electronic mail message is to be forwarded from the facsimile mail server;
  - d. forwarding the electronic mail message to the IP address of the Gateway selected;
  - and
  - e. forwarding the facsimile document from the Gateway selected to the recipient.
2. The method of claim 1, wherein the step of determining the IP address includes selecting the IP address from a lookup table having utilization data with respect to one or more Gateways in one or more Zones in an H 323 network, which utilization data is obtained from a Gatekeeper associated with the H 323 network.
3. The method of claim 2, wherein, in the step of determining the IP address, the lookup table further comprises a Gateway domain name associated with one or more Gateways in one or more Zones in the H 323 network, and an IP address for one or more of the Gateways in one or more of the Zones.
4. The method of claim 3, wherein the step of determining the IP address further comprises:

- a. choosing a Gateway domain name by reference to the telephone number of the recipient in the electronic mail message address;
  - b. selecting the Gateway whose utilization is lowest from among the Gateways associated with the Gateway domain name chosen; and
  - c. determining the IP address of the Gateway selected.
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5. The method of claim 4, wherein the step of choosing the Gateway domain name includes doing so by reference to an area code portion of the telephone number of the recipient.
  6. The method of claim 4, wherein the step of choosing the Gateway domain name includes doing so by reference to an area code portion of the telephone number of the recipient for some area codes, and to a combination of an area code portion and an exchange portion of the telephone number of the recipient for other area codes.
  7. The method of claim 4, wherein the step of choosing the Gateway domain name includes doing so by reference to an area code portion and an exchange portion of the telephone number of the recipient.
  8. The method of claim 2, wherein the step of obtaining the utilization data includes querying the Gatekeeper periodically for the data.
  9. The method of claim 2, wherein the step of determining the IP address includes selecting the IP address from the lookup table maintained at the facsimile mail server.
  10. The method of claim 2, wherein the step of determining the IP address includes selecting the IP address from the lookup table maintained at the Gatekeeper.

11. The method of claim 1, wherein the step of forwarding the facsimile document includes forwarding the document over a conventional telephone network.
12. The method of claim 1, wherein the step of generating the electronic mail message includes generating the message in a computer.
13. The method of claim 12, wherein the step of forwarding the electronic mail message to the facsimile mail server includes forwarding the message from the computer to a mail server and then from the mail server over an IP network to the facsimile mail server.
14. The method of claim 1, further comprising formatting the facsimile document in a format suitable for its transmission as an attachment to an electronic mail message.
15. The method of claim 14, wherein the step of formatting includes formatting the facsimile document as a TIF attachment.
16. A method for facilitating the transmission of a facsimile document to a recipient, comprising:
  - a. defining a Gateway domain name for one or more Zones in an H 323 network, each Zone comprising a set of one or more Gateways;
  - b. obtaining, from a Gatekeeper associated with the H 323 network, utilization data concerning one or more Gateways in one or more of the Zones; and
  - c. generating a lookup table comprising a Gateway domain name for one or more of the Zones, the utilization data with respect to one or more of the Gateways in the

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10                   Zones obtained from the Gatekeeper, and an IP address for one or more of the Gateways in the Zones.

17.    The method of claim 16, further comprising formatting the facsimile document in a format suitable for its transmission as an attachment to an electronic mail message.
18.    The method of claim 17, wherein the step of formatting includes formatting the facsimile document as a TIF attachment.
19.    The method of claim 16, wherein the step of obtaining the utilization data includes querying the Gatekeeper periodically for the data.
20.    The method of claim 19, wherein the step of querying the Gatekeeper includes doing so every minute.
21.    The method of claim 16, wherein the lookup table is maintained at a facsimile mail server.
22.    The method of claim 16, wherein the lookup table is maintained at the Gatekeeper.
23.    The method of claim 16, further comprising:
  - a.   determining, by reference to a telephone number of the recipient in an electronic mail message address, a Gateway domain name associated with a Zone from which the facsimile document will be transmitted over a conventional telephone network to the recipient; and

- b. selecting from the lookup table an IP address of a Gateway, from among the set of Gateways in the Zone associated with the Gateway domain name determined, whose utilization is lowest.
- 24. The method of claim 23, wherein the step of determining the Gateway domain name associated with the Zone from which the facsimile document will be transmitted over the conventional telephone network to the recipient includes determining the name by reference to an area code portion of the telephone number of the recipient.
- 25. The method of claim 23, wherein the step of determining the Gateway domain name associated with the Zone from which the facsimile document will be transmitted over the conventional telephone network to the recipient includes determining the name by reference to an area code portion of the telephone number of the recipient for some  
5 area codes, and to a combination of an area code portion and an exchange portion of the telephone number of the recipient for other area codes.
- 26. The method of claim 23, wherein the step of determining the Gateway domain name associated with the Zone from which the facsimile document will be transmitted over the conventional telephone network to the recipient includes determining the name by reference to an area code portion and an exchange portion of the telephone number of  
5 the recipient.
- 27. A method for sending a facsimile document to a recipient, comprising:
  - a. defining, for each of a plurality of Zones in an H 323 network, a domain name to be associated with a set of one or more Gateways in the Zone;

- b. making inquiry on a periodic basis of a Gatekeeper associated with the H 323  
5 network;
- c. obtaining from the Gatekeeper utilization data with respect to one or more of the  
Gateways in one or more of the Zones;
- d. creating a lookup table comprising, for each of the Zones, the Gateway domain  
name defined for association with the set of Gateways therein, an IP address for  
10 each of the Gateways therein, and the utilization data with respect to the  
Gateways therein obtained from the Gatekeeper;
- e. formatting the facsimile document in a format suitable for its transmission as an  
attachment to an electronic mail message;
- f. creating an electronic mail message for transmission from the computer to a mail  
15 server, with the electronic mail message having associated with it an address  
containing a telephone number of the recipient to which the facsimile document is  
to be transmitted, and a domain name of a facsimile mail server;
- g. making the facsimile document an attachment to the electronic mail message;
- h. sending the electronic mail message from the computer to the mail server;
- 20 i. determining an IP address of the facsimile mail server whose domain name is  
contained in the electronic mail message address;
- j. forwarding the electronic mail message over an IP network to the facsimile mail  
server;
- k. determining, by reference to the telephone number of the recipient in the  
25 electronic mail message address, a Gateway domain name associated with a set of

Gateways in a Zone from which the facsimile document will be transmitted over a conventional telephone network to a telephone of the recipient;

- l. selecting from the lookup table an IP address of a Gateway whose utilization is lowest which is associated with the Gateway domain name determined;
- m. forwarding the electronic mail message over the H 323 network to the IP address of the Gateway selected; and
- n. forwarding the facsimile document over the conventional telephone network from the Gateway selected to the telephone of the recipient.

28. A system for sending a facsimile document to a recipient, comprising:

- a. means for generating an electronic mail message to which the facsimile document is attached, the message having associated therewith an address containing a telephone number of the recipient to which the facsimile document is to be transmitted, and a domain name of a facsimile mail server;
- b. means for forwarding the electronic mail message to the facsimile mail server;
- c. means for determining an IP address of a Gateway whose utilization is lowest to which the electronic mail message is to be forwarded from the facsimile mail server;
- d. means for forwarding the electronic mail message to the IP address of the Gateway selected; and
- e. means for forwarding the facsimile document from the Gateway selected to the recipient.

29. The system of claim 28, wherein the means for determining the IP address includes means for selecting the IP address from a lookup table having utilization data with

respect to one or more Gateways in one or more Zones in an H 323 network, which utilization data is obtained from a Gatekeeper associated with the H 323 network.

30. The system of claim 29, wherein the lookup table further comprises a Gateway domain name associated with one or more Gateways in one or more Zones in the H 323 network, and an IP address for one or more of the Gateways in one or more of the Zones.
31. The system of claim 30, wherein the means for determining the IP address further comprises:
- a. means for choosing a Gateway domain name by reference to the telephone  
5           number of the recipient in the electronic mail message address;
  - b. means for selecting the Gateway whose utilization is lowest from among the Gateways associated with the Gateway domain name chosen; and
  - c. means for determining the IP address of the Gateway selected.
32. The system of claim 31, wherein the means for choosing the Gateway domain name includes means for doing so by reference to an area code portion of the telephone number of the recipient.
33. The system of claim 31, wherein the means for choosing the Gateway domain name includes means for doing so by reference to an area code portion of the telephone number of the recipient for some area codes, and to a combination of an area code portion and an exchange portion of the telephone number of the recipient for other  
5           area codes.



34. The system of claim 31, wherein the means for choosing the Gateway domain name includes means for doing so by reference to an area code portion and an exchange portion of the telephone number of the recipient.
35. The system of claim 29, wherein the means for obtaining the utilization data includes means for querying the Gatekeeper periodically for the data.
36. The system of claim 29, wherein the means for determining the IP address includes means for selecting the IP address from the lookup table maintained at the facsimile mail server.
37. The system of claim 29, wherein the means for determining the IP address includes means for selecting the IP address from the lookup table maintained at the Gatekeeper.
38. The system of claim 28, wherein the means for forwarding the facsimile document includes means for forwarding the document over a conventional telephone network.
39. The system of claim 28, wherein the means for generating the electronic mail message includes means for generating the message in a computer.
40. The system of claim 39, wherein the means for forwarding the electronic mail message to the facsimile mail server includes means for forwarding the message from the computer to a mail server and then from the mail server over an IP network to the facsimile mail server.

41. The system of claim 28, further comprising means for formatting the facsimile document in a format suitable for its transmission as an attachment to an electronic mail message.

42. The system of claim 41, wherein the means for formatting includes means for formatting the facsimile document as a TIF attachment.

43. A system for facilitating the transmission of a facsimile document to a recipient, comprising:

a. means for defining a Gateway domain name for one or more Zones in an H 323 network, each Zone comprising a set of one or more Gateways;

5 b. means for obtaining, from a Gatekeeper associated with the H 323 network, utilization data concerning one or more Gateways in one or more of the Zones; and

c. means for generating a lookup table comprising a Gateway domain name for one or more of the Zones, the utilization data with respect to one or more of the Gateways in the Zones obtained from the Gatekeeper, and an IP address for one or more of the Gateways in the Zones.

10 44. The system of claim 43, further comprising means for formatting the facsimile document in a format suitable for its transmission as an attachment to an electronic mail message.

45. The system of claim 44, wherein the means for formatting includes means for formatting the facsimile document as a TIF attachment.

46. The system of claim 43, wherein the means for obtaining the utilization data includes means for querying the Gatekeeper periodically for the data.
47. The system of claim 46, wherein the means for querying the Gatekeeper includes means for doing so every minute.
48. The system of claim 43, wherein the lookup table is maintained at a facsimile mail server.
49. The system of claim 43, wherein the lookup table is maintained at the Gatekeeper.
50. The system of claim 43, further comprising:
- a. means for determining, by reference to a telephone number of the recipient in an electronic mail message address, a Gateway domain name associated with a Zone from which the facsimile document will be transmitted over a conventional telephone network to the recipient; and
  - b. means for selecting from the lookup table an IP address of a Gateway, from among the set of Gateways in the Zone associated with the Gateway domain name determined, whose utilization is lowest.
51. The system of claim 50, wherein the means for determining the Gateway domain name associated with the Zone from which the facsimile document will be transmitted over the conventional telephone network to the recipient includes means for determining the name by reference to an area code portion of the telephone number of the recipient.

52. The system of claim 50, wherein the means for determining the Gateway domain name associated with the Zone from which the facsimile document will be transmitted over the conventional telephone network to the recipient includes means for determining the name by reference to an area code portion of the telephone number of the recipient for some area codes, and to a combination of an area code portion and an exchange portion of the telephone number of the recipient for other area codes.
53. The system of claim 50, wherein the means for determining the Gateway domain name associated with the Zone from which the facsimile document will be transmitted over the conventional telephone network to the recipient includes means for determining the name by reference to an area code portion and an exchange portion of the telephone number of the recipient.
54. A system for sending a facsimile document to a recipient, comprising:
- a. means for defining, for each of a plurality of Zones in an H 323 network, a domain name to be associated with a set of one or more Gateways in the Zone;
  - b. means for making inquiry on a periodic basis of a Gatekeeper associated with the H 323 network;
  - c. means for obtaining from the Gatekeeper utilization data with respect to one or more of the Gateways in one or more of the Zones;
  - d. means for creating a lookup table comprising, for each of the Zones, the Gateway domain name defined for association with the set of Gateways therein, an IP address for each of the Gateways therein, and the utilization data with respect to the Gateways therein obtained from the Gatekeeper;

- e. means for formatting the facsimile document in a format suitable for its transmission as an attachment to an electronic mail message;
- f. means for creating an electronic mail message for transmission from the computer to a mail server, with the electronic mail message having associated with it an address containing a telephone number of the recipient to which the facsimile document is to be transmitted, and a domain name of a facsimile mail server;
- g. means for making the facsimile document an attachment to the electronic mail message;
- h. means for sending the electronic mail message from the computer to the mail server;
- i. means for determining an IP address of the facsimile mail server whose domain name is contained in the electronic mail message address;
- j. means for forwarding the electronic mail message over an IP network to the facsimile mail server;
- k. means for determining, by reference to the telephone number of the recipient in the electronic mail message address, a Gateway domain name associated with a set of Gateways in a Zone from which the facsimile document will be transmitted over a conventional telephone network to a telephone of the recipient;
- l. means for selecting from the lookup table an IP address of a Gateway whose utilization is lowest which is associated with the Gateway domain name determined;
- m. means for forwarding the electronic mail message over the H 323 network to the IP address of the Gateway selected; and

- 35            n. means for forwarding the facsimile document over the conventional telephone network from the Gateway selected to the telephone of the recipient.